

REMARKS

Claims 1-31 were pending. Claims 1-31 stand rejected. Claims 1, 7-8, and 23-26 were amended. Claims 32-33 were added. Claims 1-33 remain in the application.

Independent Claims 1 and 26 have been amended to improve the grammar of step b.

Claims 1-31 stand rejected under 112, second paragraph. The rejection stated:

'Claim 1 recites the limitation of “using the color weighting factor to modify either the first value **or** the second value” in step d). It is unclear why “or” is used and not “and” because the next step e) requires both the first value and the second value.

'Claim 26 recites the similar limitation.

'Claims 2-25 and 27-31 are also rejected for the same reasons as being dependent upon the rejected base claims.'

Claim 1 has been amended to correct the indicated language:

1. A digital image processing method for enhancing a color digital image composed of a plurality of pixels having color values representative of the image, said method comprising the steps of:

- a) identifying a local neighborhood of pixels including a pixel of interest;
- b) using the color values of one or more of the pixels from the local neighborhood to calculate a color weighting factor for the pixel of interest, the color weighting factor being a near continuous function of the location of said one or more pixels in a color space;
- c) applying a spatial filter to the values of pixels from the local neighborhood to calculate a first signal value and a second signal value for the pixel of interest;
- d) using the color weighting factor to modify the first value;
- e) generating an enhanced pixel value for the pixel of interest from the modified first value and the second value; and
- f) repeating steps (a) through (e) for other pixels in the color digital image.

The changed language of Claim 1 is supported by the application as filed, notably, Figures 3, 4, and 11; at page 10, lines 21-23; page 11, lines 1-14, 19-20, and 26-29; page 12, lines 22-24; page 18, line 13 to page 19, line 6.

The same changes have been made in Claim 26 and are supported on the same basis. Claims 2-25 and 27-31 are allowable as depending from Claims 1 and 26, respectively.

Claims 7-25 stood allowable if rewritten to overcome the rejections under 35 USC 112, second paragraph, set forth in the Office action and to include all of the limitations of the base claim and any intervening claims. Claims 7-8 and 23-25 have been so rewritten as independent claims incorporating the language of amended Claim 1. Claims 9-10 are allowable as depending from Claim 8. Claims 11-22 are allowable as depending from Claim 7.

Claims 28-31 stood subject to only the 35 USC 112 rejection. Claim 28 has been rewritten as an independent claim incorporating the language of amended Claim 26. Claims 29-31 are allowable as depending from Claim 28.

Claims 1-6 and 26-27 stood rejected under 102(e) as being anticipated by Gallagher et al (US 6,453,075 B1). In pertinent part, the rejection cites Gallagher at column 2, lines 45-60 and column 6, lines 18-36 as disclosing step b of Claim 1 and Figure 3 of Gallagher as disclosing step d of Claim 1.

Claim 1 requires:

'... b) using the color values of one or more of the pixels from the local neighborhood to calculate a color weighting factor for the pixel of interest, the color weighting factor being a near continuous function of the location of said one or more pixels in a color space; ...'

and

'... d) using the color weighting factor to modify the first value; ...'

Claim 1 requires calculation of a color weighting factor that is a function of the location of a set of pixels in a color space. The specification discusses this in relation to particular embodiments:

'Additionally, the chrominance channels $gm(x,y)$ and $ill(x,y)$ are input to the color gain determiner 135. The color gain determiner 135 calculates an individual level of boost $B_c(x,y)$ to apply at each location (x,y) of the texture signal, dependent upon the local color as described by the

chrominance channels $gm(x,y)$ and $ill(x,y)$ and the distance of location (x,y) from identified color region(s) in a chrominance color space. The local color can be calculated from the pixel of interest, e.g., the central pixel 110 shown in Figure 9, or it may be derived from the values of one or more pixels sampled from a local neighborhood of pixels including the pixel of interest.' (page 30, lines 4-12)

Gallagher, in contrast, does not make such a calculation. Gallagher instead discloses the application of a tone scale function that provides values, which are each a function of an input color channel taken separately. (Gallagher, col. 5, lines 55-56; col. 5, line 64 to col. 6, line 8) Since the values are separate for each color channel, different tone scale functions can be used for each color channel. (Gallagher, col. 3, lines 17-18)

Claims 2-6 and added Claim 32 are allowable as depending from Claim 1. Claim 32 is supported by the application as filed, notably, the original claims.


Claim 26 is supported and allowable on the same grounds as Claim 1.

Claim 27 and added Claim 33 are allowable as depending from Claim 26. Claim 33 is supported by the application as filed, notably, the original claims.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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